

~~CONFIDENTIAL~~

DECLASSIFIED BY ORIGINATING AGENCY

CLAIMS

Sub A11

1. Ramjet engine (3) incorporating a combustion chamber (10) ending in a gas-ejection nozzle (13), a cruising propulsion unit (11) feeding liquid fuel into said combustion chamber, and at least one air duct (4) which feeds air intended for the combustion of said fuel into said combustion chamber, wherein said ramjet engine contains a rigid tubular element (7) whose interior volume is divided into two spaces (9, 10) by an intermediate transverse partition (8), in such a way that one (9) of said spaces houses said cruising propulsion unit (11), while (the other (10) houses) said combustion chamber (13, 14), and while passages (12) are cut in said intermediate transverse partition (8) to allow feeding of liquid fuel into said combustion chamber (10) and said air duct is mounted on said tubular element so as to feed (combustion air) through the tubular wall of said tubular element (7).

2. Ramjet engine according to claim 1, wherein said tubular element (7) is made of a composite material composed of resistant fibers coated with a polymerizable synthetic resin.

Sub A12

3. Ramjet engine according to either of claims 1 or 2, wherein said intermediate transverse partition (8) is made directly unitary with said rigid tubular element (7).

4. Ramjet engine according to either of claims 1 or 2, wherein said intermediate transverse partition (8) is made unitary with said rigid tubular element by means of one of the

~~CONFIDENTIAL~~

DECLASSIFIED BY ORIGINATING AGENCY

CONFIDENTIAL

two assemblies formed by said cruising propulsion unit and by said combustion chamber.

5. Ramjet engine according to any of claims 1 to 4, wherein, of the two assemblies formed by said cruising propulsion unit and said combustion chamber, at least one is formed within said tubular element (7).

6. Ramjet engine according to any of claims 1 to 4, wherein, of the two assemblies formed by said cruising propulsion unit and said combustion chamber, at least one is constructed as a module, positioned, and attached in said tubular element (7).

7. Ramjet engine according to any of claims 1 to 4, wherein said tubular element (7) is constructed around at least one of the two assemblies formed by said cruising propulsion unit and said combustion chamber.

8. Ramjet engine according to claim 7, wherein said assembly or assemblies is or are ready for use and are incorporated into the tubular element (7) during the construction of this latter.

9. Ramjet engine according to claim 7, wherein said assembly or assemblies, made of a composite material, are polymerized at the same time as said tubular element.

10. Ramjet engine according to any of claims 1 through 9, wherein said tubular element (7) incorporates inserts (17, 18) for attachment of said air ducts (4).

11. Ramjet engine according to claim 10, wherein the inserts (18) designed to attach the ends of said air ducts (4) into said tubular element (7) in the vicinity of the combustion chamber,

CONFIDENTIAL

~~DECLASSIFIED BY ORIGINATING AGENCY~~
CONFIDENTIAL

are made unitary with ~~DECLASSIFIED BY ORIGINATING AGENCY~~ said intermediate transverse partition.

12. Ramjet engine according to any of claims 1 through 11, wherein said combustion chamber (13, 14) contains a consumable accelerator (16).

13. Ramjet engine according to any of claims 10 through 12, in which the openings (20a, 20b) through which said air ducts (4) empty into said combustion chamber (10), are cut in the wall of said tubular element (7) by pyrotechnic fuses (23), wherein said inserts (18), designed to attach the ends of said air ducts onto said tubular element in the vicinity of said combustion chamber, are shaped to act as cutting knives.

14. Missile incorporating a ramjet engine such as that described in any of claims 1 through 13.

~~DECLASSIFIED BY ORIGINATING AGENCY~~
CONFIDENTIAL